

U.S. GEOLOGICAL SURVEY

Author Drafting Guidelines

Version 1.0 March 1996

The drafters and editors in the Central Publications Group are available for consultation, advice, and preedits. Additional sources of information about style and standards can be found in Suggestions to Authors of Reports of the U.S. Geological Survey Cartographic and Printing Standards, and the GPO Style Manual.

Page Size Illustrations and plates for book publication

Illustrations should be prepared at or very close to final publication size. A slight reduction (about 20%) can improve the appearance of some drafting by sharpening it and minimizing the evidence of a shaky hand, but even experienced drafters find it difficult to anticipate how lines, lettering, and patterns will look if greatly enlarged or reduced.

As a general rule, illustrations should be as concise as possible; however, all lines, lettering, and patterns must be legible. Although side-title illustrations are not encouraged, they are sometimes unavoidable. Recommended image sizes and absolute maximum image sizes (in parentheses) are shown in the following table. If the maximum image sizes are used, the captions will appear on facing pages or in adjacent columns.

Type of Illustration	Bulletin, Circular, Professional Paper, Water-Supply Paper
Column width, bottom title	3 1/4" x 8 3/4" (3 1/4" x 9 1/8")
Page width, bottom title	6 7/8" x 8 2/4" (6 7/8" x 9 1/8")
Page width, side title	6 1/4" x 9 1/8" (6 7/8" x 9 1/8")

Maximum image sizes for standard carriers used to prepare maps and plates in CPG are 22" x 28" 40" x 27" 42" x 32", and 40" x 56". Under our current book-printing contract, plates larger than 22" x 34" cost a premium. Images larger than 40" x 56" are split into two plates (for example, north half, south half).



All plates and figures (maps, line drawings, or photographs) should stand alone. Any symbol, pattern, or line that appears on the figure should be explained in the explanation or in the caption.

It is the author's responsibility to get permission to use copyrighted material, and the original copy of that permission should accompany the manuscript when it is submitted to approval.

Style and content should be consistent from figure to figure, between figure(s) and plate(s), and between figure(s) and text and (or) tables. For example, use the same style lettering to label latitude and longitude, the same lineweight for the neatlines, the same pattern for a given geologic unit, or the same symbol for a given range of earthquake magnitudes. Keep in mind that if the figures are not all prepared at the same scale, reduction or enlargement will change the type size, intensity of the patterns, and lineweights so that they no longer will appear the same in the final format.

All lines, lettering, and patterns must be solid black. When drafting by hand, use a high-quality black drafting ink (such as Pelikan T ink). If using computer drafting, make sure linework from the plotter is consistent and solid black. Watery, gray ink and pencil will not reproduce acceptably, if at all. Check the quality of all linework on a light table; if there is any question about the quality of the linework, ask CPG drafters or editors for advice.

Keep all material that is to be printed in a specific color or screened the same amount on a separate overlay. (Screening is a photographic process that subdues the image, making it appear gray.)

The best material for drafting is scale-stable mylar with a matte finish, such as Keuffel & Esser Stabilene or Dupont Cronaflex. Paper is not scale stable; many of the clear-film plots from the plotter are not scale stable.

Do not mix kinds of material (paper and mylar) when laying out an oversized plate or page-size illustration. If the originals for an illustration are not all the same kind of material, photographically convert them to scale-stable film.

If an illustration consists of several overlays, all overlays must be on scale-stable material, and they must be registered one to another. Register the overlays using pre-punched material, corner ticks, or bullseyes.

Type sizes on page-size illustrations usually range from 7 point to 9 point; 5 point is an absolute minimum. Remember to account for reduction in selecting type sizes.

Parts of an illustration are labelled with either serif type styles (such as Souvenir, Times Roman, Dutch) or sans serif type styles (such as Univers, Helvetica, Swiss) as follows:

EXPLANATION (heading)	Serif, caps, bold
Explanation (type in the body of the explanation)	Serif, caps and lowercase
Cultural features (cities, towns)	Serif, large are caps, small are caps and lowercase
Structural features (faults, folds)	Serif, caps



Photographs

(Including photographs, photomicrographs, scanning electron micrographs, stereopairs, fossil plates)

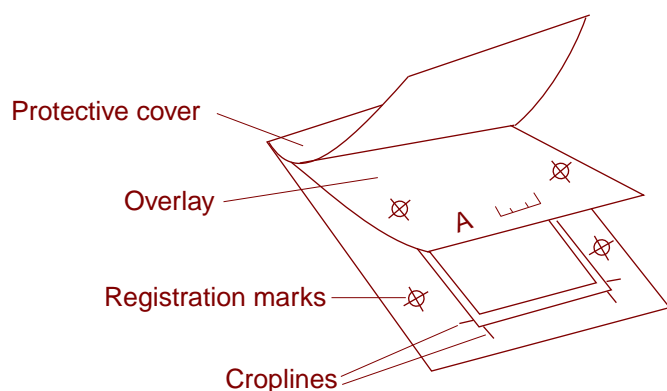
Scale may be shown by (1) object in photograph, (2) rake scale, or (3) sentence in caption.

Do not write on a photograph (front or back) or on an overlay that comes in contact with the photograph. The pressure of the pen or pencil will cause the writing impression to show on the surface of the photograph and appear when printed. If photographs must be identified on the reverse side, use a grease pencil and press gently or use tags that can be taped to the back and removed after use.

Do not use paper clips; they will leave an impression on the photograph.

Photographs may be submitted mounted on cardboard with non-permanent glue (such as Spray Mount). Each photograph is mounted separately. Use a cover sheet to protect the photograph and (or) type overlay.

Never trim the photograph; indicate crop lines on the board it is mounted on. If the photograph is not mounted, indicate crop lines on a registered overlay; remember to remove the photograph before the lines are drawn (see example below).



Example of how photographs are mounted on cardboard.

Never fold or roll a photograph. This will cause cracks in the emulsion which will appear when printed. It can also destroy the photograph for future use.

Do not put tape over the image area.

Any objects mentioned in the text or caption should be labelled on a registered overlay; crop lines should also be indicated on a registered overlay.

Indicate top, if not obvious (on the photograph and any overlays).

If a photograph was taken by someone other than the author, give credit in the caption. If it helps the reader, add the direction of the view of the photograph to the caption (view to the northwest).



Geographic features (mountains, basins)	Sans serif, large are caps, small are caps and lowercase
Geologic units (such as Qal)	Sans serif, caps and lowercase
Latitude and longitude	Sans serif
Graphs (all type)	Sans serif, caps
Water features	Serif, italic, large are caps, small are caps and lowercase
Parts of figures (A, B, C)	Serif, italic, caps

Type of photographic material and quantity the author is responsible for supplying to CPG.

When you return your report to CPG for further processing, please supply the following photographic materials.

For photographs to be printed in black and white (b/w):

the original continuous-tone b/w negative and two continuous-tone b/w prints (preferably glossy) of each photograph (even if original photograph is in color).

For photographs to be printed in color:

the original continuous-tone color negative and two continuous-tone color prints (preferably glossy) of each photograph—this is your only option if information such as lines or lettering is to be added to your color photograph

OR

the original and one duplicate color slide of each photograph PLUS, if photograph is to be cropped, two prints (either b/w or color).

CPG cannot make nor will it pay for the making of the negatives, prints, or slides specified above; however, CPG will obtain them from commercial sources if you request and if you supply an account number to be charged.

If you have already given CPG your original negatives or slides or your best available prints and you need them back in order to have the photographic materials CPG requires made, please call immediately to request them.

After your report is published, the original negative and one print of each photograph or the original color slide of each photograph will be archived in the USGS Photographic Library in Denver, so they will not be returned to you. If CPG may not archive your original negatives or slides because you require them for future use, you must make that known and must supply duplicates for archiving. Items not archived will be returned to you after publication.

All captions are written in telegraphic style. If a figure has parts, caption begins with overall statement and any information that applies to all parts. The parts are labelled alphabetically (*A*, *B*, *C*, etc.). Because captions are typeset, explain symbols using words (triangle indicates ...).



Maps

If a figure or a plate has a topographic base, use USGS geographic bases whenever topographic coverage is available. Base credit is added to the map in the lower left-hand corner or to the caption. Recommended publication scales include the following: 1:20,000, 1:24,000, 1:25,000, 1:31,680, 1:50,000, 1:62,000, 1:63,360, 1:100,000, 1:125,000, 1:250,000, 1:500,000, 1:1,000,000.

Maps must have a scale. Use a bar scale on plates and a rake scale on figures (see example top of page 7). Units on the scale are spelled out, not abbreviated. Do not use a ratio scale (for example, 1:24,000) in the caption of a page-size illustration or on any type of illustration that is drafted for reduction.

Orient with north to the top wherever possible.

Maps require some sort of geographic reference system, commonly latitude and longitude. Latitude and longitude ticks point inward from the neatline and appear on all sides of the map. Ticks are labelled outside the neatline. On a plate, longitude ticks are labelled on the top and bottom, and latitude ticks on the left and right. On page-size illustrations, longitude ticks are labelled on the top and latitude ticks are labelled on the left; if the area is very irregular in shape, they are labelled all around. Degrees may be stacked over minutes and seconds in order to save space on page-size illustrations. If townships and ranges are used, they appear along the right side and bottom of the map and the letters and numbers are used without periods (T5S).

Include labels outside the neatline in figuring the size of the illustration.

Corners may, but do not have to, coincide with latitude and longitude ticks (see example top of page 7).

If a small index map is used it is labelled "AREA OF MAP," "STUDY AREA," "QUADRANGLE LOCATION," or something similar that is concise and descriptive.

Abbreviate only when necessary to reduce clutter. A period is used with abbreviations in charts and graphs, but not on a map. Units of measure (with numbers) are abbreviated on figures.

If several line weights (thicknesses), several styles of lines (dotted, dashed, etc.), or several patterns or symbols are used on one illustration, make sure that they are easily distinguishable from one another; if the original will be reduced for publication, make sure they will be distinguishable at the reduced scale.

If patterns and colors are not used, all areas of a figure must be labelled. Take care to avoid overprinting important features on the base map or other overlays. Patterns should not obscure letter symbols. If, because of crowding, you must use a line (leader) to point to an area or symbol being labelled, make it a plain, thin, straight line without an arrowhead (see example bottom of page 7).




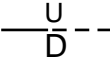



All symbols and patterns must be identified on a map, and generally an explanation is used. Put the explanation inside the neatline if a blank area of about the right size and shape exists and the explanation does not crowd or confuse the map. The explanation can be placed outside the neatline (next to the figure on the same page, on a






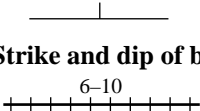
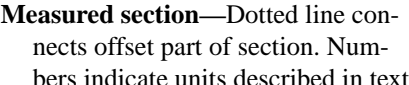

facing page, or below the figure) if it does not fit inside the neatline. The word “EXPLANATION” is centered in all caps over the symbols.

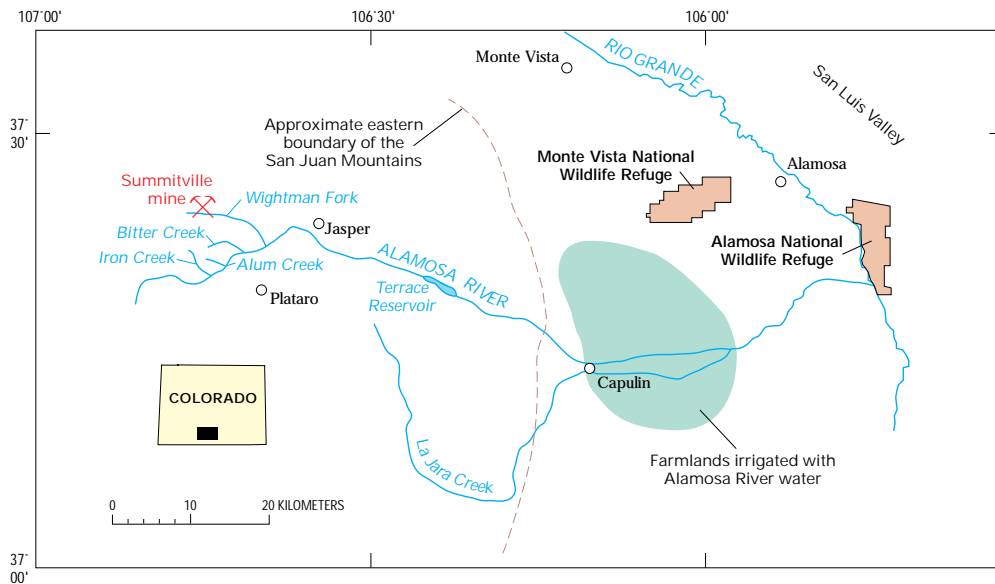
Two formats of explanation are acceptable (one is preferred), but consistency in the report is important.

Preferred: Symbols are aligned on the left side with the description of each to the right. Descriptions are cap and lowercase and bold; any explanatory material follows a 1-em dash, begins with a capital letter, and is in the regular type style (not bold). Overrun is indented. Subdivisions are indented. There are no periods following descriptions.

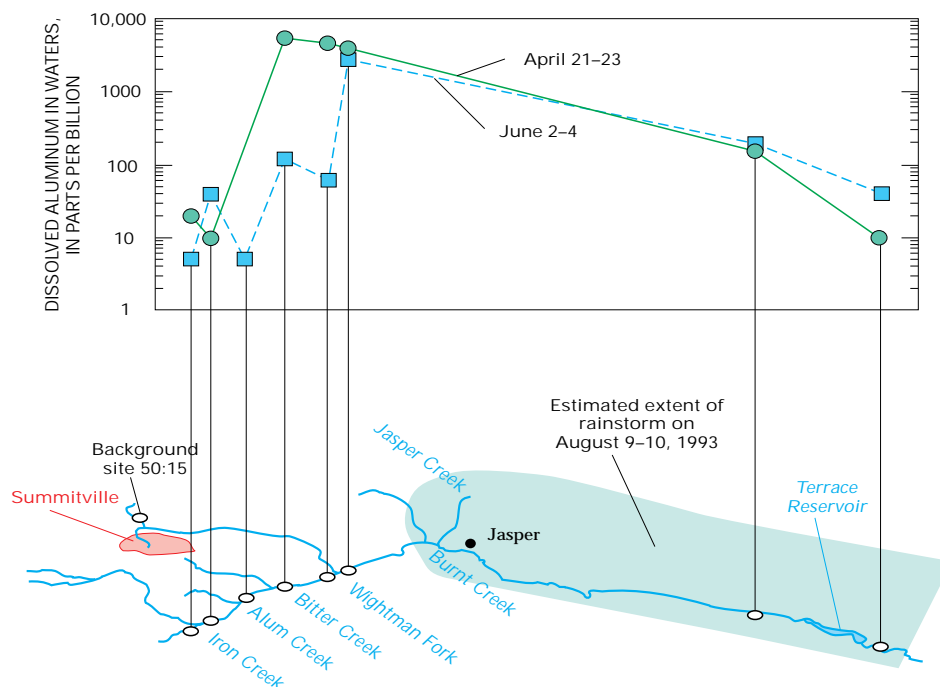
EXPLANATION	
	Tertiary andesite
	Pennsylvanian Magdalena Group
	Mine
	Fault —Dashed where inferred. D, down-thrown side; U, upthrown side
	Vein —With dip in degrees
	Contact
	Geochemical anomalies
	Calcite vein sample

Optional: Symbol is centered over the descriptive material, which is in caps and lowercase. Any explanatory material is centered under the main description; if it is several lines long, overrun is indented.

EXPLANATION	
	Contact
	Concealed normal fault —Bar and ball on present downthrown side; dotted bar and ball on postulated original downthrown side
	Concealed thrust fault —Sawteeth on overriding block
	Strike and dip of beds
	Measured section —Dotted line connects offset part of section. Numbers indicate units described in text
	Quarry site



Example showing use of color and letter symbols on a four-color map and the use of a rake scale.

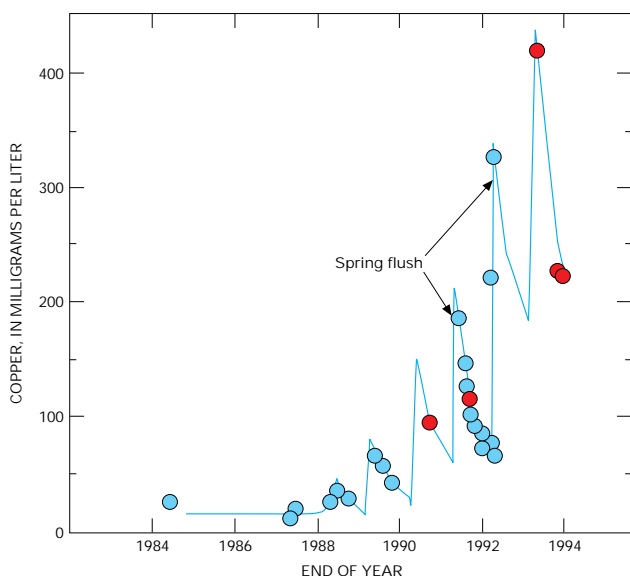


Example showing combination of techniques used to identify symbols.



Line Drawings

Graphs are enclosed in a rectangular neatline with ticks pointing inward all around. Ticks are labelled on the left and bottom. Spell out all words including units of measure (see below).



Many kinds of illustrations (such as graphs, histograms, seismic profiles, cross sections, and photographs) require scales. A graphical scale (bar scale, rake scale, or linear scale) is preferred because it will be correct if the illustration is enlarged or reduced; a ratio scale will not. The word “scale” generally is not used to label the scale on page-size illustration. The units of measure are spelled out, not abbreviated. Put the scale inside the neatline if it will fit and will not be lost among other information, otherwise center it below the figure.

A north arrow is needed only if the figure is oriented such that north is not straight up or if there is no geographic reference system (for example, on some mine maps). All lines, symbols, and patterns on a figure must be explained in an explanation or in the figure caption. Patterns used in lithologic columnar sections should be chosen with care so that they are easily distinguishable at the publication scale (see facing column).

Section 11. Tyonek(?) Formation. On Lake Creek 6.3 km west of Shulin Lake. SW⁴SE⁴NW⁴ sec. 30, T. 42 N., R. 9 W., Seward Meridian

